PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.: 10/684,943 Confirmation No.: 3675
Applicant(s): Nomula
Filed: 10/14/2003
Art Unit: 3727
Examiner: Robin A. Hylton
Title: EASY-OPENING CONTAINER AND CLOSURE WITH RADIATION-WEAKENED BOND AND METHOD THEREFOR

Docket No.: 031599/258475
Customer No.: 00826

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

July 30, 2007

DECLARATION UNDER 37 C.F.R. § 1.132

Sir:

I, Srinivas Nomula, hereby declare and state that:

1. I am the inventor of the claimed invention of the above-identified U.S. Patent Application Serial No. 10/684,943, titled "Easy-Opening Container and Closure with Radiation-Weakened Bond and Method Therefor" (hereinafter referred to as "the Application"). I am currently employed by Sonoco Products Company, which owns Sonoco Development, Inc., the assignee of the above-identified application, and have been at all times during and following the invention described by the Application.

2. I earned my Ph.D. in chemical engineering in 1999 and have studied and worked with chemical compositions since about 1995. I have been employed at Sonoco as a Research & Development Engineer (February 2002 – July 2005), as a

Research & Development Associate (July 2005 – July 2006), and as a Market Segment Manager (July 2006 – present).

3. I have reviewed the Office Action dated May 30, 2007, including each of the bases of rejection of the claims as being obvious over various combinations of references that appear to include U.S. Patent No. 6,688,486 (hereinafter "Diamond")[1] with one or more of U.S. Patent Nos. 5,069,355 ("Matuszak"), 5,752,614 ("Nelson, et al."), and 6,302,321 ("Reese, et al.").

4. I disagree with the assertion set forth in the Office Action dated May 30, 2007 that "[t]he bond of Diamond is inherently a radiation weakened bond since the radiation must first weaken the adhesive in order for the adhesive to soften enough to create a bond. Although the bond is not stated to be radiation weakened. It is inherently one." Office Action, page 9.

5. More particularly, Diamond, et al. discloses that radiation can be used to activate an adhesive bond. Diamond, et al. does not disclose that radiation can be used to weaken a bond. Moreover, the bond disclosed by Diamond, et al. is not inherently radiation weakened. That is, the formation of the bond of Diamond, et al. does not necessarily or essentially include radiation weakening. To the contrary, Diamond, et al. does not disclose or require weakening the bond with radiation after the bond is formed.

6. Further, the structure of the presently claimed invention is distinct from the structure that is taught or suggested by Diamond, et al. In particular, the

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[1] The Office Action does not refer to U.S. Patent No. 6,688,486, but instead includes an erroneous reference to "Diamond et al. (US 5,180,599)," even though the listed inventors of U.S. Patent No. 5,180,599 are Feldmeier, et al., not Diamond, et al. All subsequent references to Diamond, et al. in this Declaration refer to U.S. Patent No. 6,688,486.

present application refers to a "radiation weakened bond," i.e., a bond that is weakened by radiation. Radiation weakening of a bond results when chemical bonds of the bond material are broken by radiation. In the case of a polymer bond material, such radiation weakening chemically alters various links of the polymer chains and shortens the polymer chains, thereby reducing the entanglement of the various chains in the bond and decreasing the strength of the bond so that a person can more easily peel the bonded membrane from the container during opening. Relative to a bond that has not been radiation weakened, the radiation weakened bond is characterized by a reduction in the length of the polymer chains and a reduction in the effective molecular weight of the polymer chains. Diamond, et al. does not teach or suggest weakening a bond by radiation, but instead states that the bond is activated. Activation of a bond does not result in breaking of chemical bonds, shortening of polymer chains, reduction in entanglement, and decrease in strength. Thus, even after activation, the bond of Diamond, et al. is structurally different from the radiation weakened bond of the present invention.

7. I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application of any patent issued thereon.

Srinivas Nomula